



2016 CALGreen Residential Mandatory Measures Checklist

This checklist applies to newly constructed buildings, additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall only apply to and/or within the specific area of the addition or alteration. (2016 CGBSC 301.1.1)

Measures in this checklist apply to either low-rise residential buildings, high-rise residential buildings, or both, unless noted with the following banner (2016 CGBSC 301.2):

[LR] = Measures applicable to low-rise buildings only

[HR] = Measures applicable to high-rise buildings only

*****Note 2016 CGBSC 301.1.1: On and after 1/1/2014, residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department.**

Feature or Measure	Required
RESIDENTIAL MANDATORY MEASURES	
Site Development (4.106)	
Projects Less Than One Acre: Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction CGBSC 4.106.2.	
Projects One Acre or More SWPPP: Newly constructed projects or additions shall comply with Milpitas Municipal Code Title 2 Chapter 13 for erosion and sediment controls, the City of Milpitas Enforcement Response Plan for Construction Site Control, and the California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit requirements.	
Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings CGBSC 4.106.3.	
Electric vehicle (EV) charging for new construction. New construction shall comply with sec. 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with California Electrical Code (CEC), Article 625.	
One and Two Family Dwellings and Townhouses EV: CGBSC 4.106.4.1. Multifamily Dwellings EV: CGBSC 4.106.4.2.	
ENERGY EFFICIENCY	
For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards CGBSC 4.201.1.	
WATER EFFICIENCY AND CONSERVATION	
Indoor Water Use (4.303)	
Water closets. The effective flush volume of all water closets shall not exceed 1.28 gpf. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.	
Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gpf and floor mounted or other urinals shall not exceed 0.5 gpf.	

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Feature or Measure	Required
Single showerheads. Showerheads shall have a max. flow rate of not more than 2.0 gpm at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.	
Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gpm at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.	
Residential lavatory faucets. The max. flow rate of residential lavatory faucets shall not exceed 1.2 gpm at 60 psi. The min. flow rate of residential lavatory faucets shall not be less than 0.8 gpm at 20 psi.	
Lavatory faucets in common and public use areas. The max. flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gpm at 60 psi.	
Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.25 gallons per cycle.	
Kitchen faucets. The max. flow rate of kitchen faucets shall not exceed 1.8 gpm at 60 psi.	
Outdoor Water Use (4.304)	
Outdoor potable water use in landscape areas. New residential developments with an aggregate landscape area equal to or greater than 500 sq ft shall comply with one of the following options: <ol style="list-style-type: none"> 1. A local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever more stringent. 2. Projects with aggregate landscape areas less than 2,500 sq ft may comply with MWELO Appendix D Prescriptive Compliance Option. 	
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	
Enhanced Durability and reduced Maintenance (4.406)	
Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.	
Construction Waste Reduction, Disposal and Recycling (4.408)	
A minimum of 65% of the non-hazardous construction waste generated at the site shall be diverted to recycle or salvaged. This is achieved by submitting a Waste Management Plan for approval by the Building and Safety Department prior to construction or demolition permit issuance and providing documentation to demonstrate compliance with the Waste Management Plan after completion of construction or demolition and/or prior to final permit inspection.	
Building Maintenance and Operation (4.410)	
O&M Manual: An operation and maintenance manual shall be available in the building at the time of final inspection.	
Recycling by Occupants: Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.	

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Feature or Measure	Required
ENVIRONMENTAL QUALITY	
Fireplaces (4.503)	
Bay Area Air Quality Management District: Effective November 1, 2016 – “No wood-burning devices of any kind may be installed in new homes or buildings being constructed in the Bay Area”.	
“Bay Area residents who begin a chimney or fireplace remodeling project that costs over \$15,000 and requires a building permit will only be allowed to install a gas-fueled, electric or EPA-certified device”.	
Gas fireplace shall be a direct-vent sealed-combustion type.	
Pollutant Control (4.504)	
At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered.	
Adhesives, sealants and caulks shall be compliant with VOC limits as shown in Table 4.504.1 or 4.504.2 as applicable.	
Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds shall comply with statewide VOC standards and other requirements.	
Paints, stains and other coatings shall be compliant with VOC limits as shown in Table 4.504.3.	
Aerosol paints and coatings shall meet the Product-Weighted MIR limits for ROC and comply with the BAAQMD percent VOC by weight of product limits of Regulation 8, Rule 49.	
All carpet shall meet the testing and project requirements per sec. 4.504.3. All carpet installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label Plus program, California Department of Public Health, NSF/ANSI 140 at the Gold level, or Scientific Certifications Systems Indoor Advantage Gold. All carpet cushion installed in the building shall meet the requirements of the Carpet and Rug Institute's Green Label program. All carpet adhesive shall meet the requirements of Table 4.504.1.	
At least 80% of floor area receiving resilient flooring shall comply with the requirements per sec. 4.504.4.	
Hardwood plywood, particleboard and medium density fiberboard (MDF) used on interior or exterior of the building shall comply with formaldehyde emission limits per Table 4.504.5.	
Documentation shall be provided to the City building inspector verifying that compliant materials have been used.	
Interior Moisture Control (4.505)	
Concrete Slab Foundations: Concrete slab foundations required to have a vapor retarder by the California Building Code or the California Residential Code shall have a capillary break installed in compliance with CGBSC 4.505.2.1.	
Building materials with visible signs of water damage shall not be installed.	
Moisture content of building materials used in wall and floor framing shall not to exceed 19% before enclosure. Moisture content shall be verified in compliance with CGBSC 4.505.3.	
Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure.	

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Feature or Measure	Required
Indoor Air Quality and Exhaust (4.506)	
Bathroom exhaust fans shall be ENERGY STAR rated and ducted to terminate outside.	
Unless functioning as a component of a whole house ventilation system, bathroom exhaust fans must be controlled by a humidity control adjustable between a relative humidity range of 50% - 80%.	
Environmental Comfort (4.507)	
Duct systems are sized, designed, and equipment is selected using the following methods: <ol style="list-style-type: none"> 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design methods. 2. Size duct systems according to ANSI/ACCA 1 Manual D-2014 (Residential Duct Systems) or other equivalent design software or methods. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or other equivalent design methods. 	
INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS	
Qualifications (702)	
HVAC system installers are trained and certified in the proper installation of HVAC systems.	
Special inspectors employed by the owner or owner's agent shall demonstrate competence for the particular type of inspection to be performed and shall have a certification or education in the area closely related to the primary job function that is acceptable to the enforcing agency.	
Verifications (703)	
Verification of compliance with this code may include construction documents, plans specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency, which show substantial conformance.	